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**TESTIMONY**

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Before the
**FEDERAL COMMUNICATIONS COMMISSION**

**Communications for America's First Responders**

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*Introduction*

Good morning Chairman Martin and members of the Federal Communications Commission. Welcome to Brooklyn, New York.

My name is Salvatore Cassano, and I am the Chief of Department of the New York City Fire Department (FDNY). I am pleased to have this opportunity to discuss with you the very substantial progress the FDNY has made toward enhancing our interoperability with local, state, regional and federal partners in the years since 9/11.

A critical component of our rebuilding efforts following 9/11 was to strengthen and improve the Department's communications capacity, looking to make the Department completely interoperable both internally – between Fire and EMS personnel – and externally, with the New York City Police Department (NYPD) and numerous other emergency response agencies. The events of 9/11 dramatically demonstrated this need.

As you may know, McKinsey & Company studied the FDNY's response on 9/11 and made numerous recommendations designed to increase our preparedness. The FDNY embraced the McKinsey Report recommendations, including those aimed at strengthening our communications capabilities.

Since 9/11, we have repeatedly been asked whether the FDNY is truly interoperable: can we communicate with the NYPD on our radios, can our Emergency Medical Service (EMS) personnel communicate electronically with our FDNY fire personnel and can EMS communicate electronically with the police? I am happy to report that, in each case, we can. As I will discuss further in a moment, we also can communicate electronically with the Office of Emergency Management (OEM), the

Federal Bureau of Investigation (FBI) and other federal agencies that may play significant roles in large-scale operations.

***Radio System***

Before discussing our efforts to improve the Department's interoperability, let me briefly discuss our strategy for improving the performance of the "handie-talkie" radios carried by our fire personnel, and on creating an integrated system that utilizes multiple components to optimize the radios' performance.

Specifically, since 2003, all Department personnel have been issued UHF handie-talkie analog radios. The Department's radios now have an emergency alert function, many more channels and use the UHF band, which allows for greater penetration in buildings, and allows for interoperability among Fire, EMS and other emergency service agencies, including the NYPD. The radios operate at a higher basic power level (two watts) and can be boosted to five watts on a pre-defined per channel basis. In addition, analog radios are generally more efficient during incidents when many Firefighters and officers are attempting to communicate at the same time over the same frequency. The analog radios are better able to allow messages to get through without being fully stepped on and muted by other messages.

The improved handie-talkie radios are part of a three-component fireground communications system that the FDNY developed since 9/11 that has proven to be very effective. To provide increased reliability when the handie-talkies are used in high-rise buildings, the system includes high-powered post radios and Battalion car repeaters.

Post radios are interoperable-capable 45-watt radios, which were designed initially for use by the Incident Commander at the command post. They are light and can be used at any assigned post within a high-rise.

Our new-generation vehicle crossband repeaters have proved to be extremely successful in boosting radio signals in high-rise and other complex environments. Having the capability to bring our own enhanced repeater to the fireground has strengthened our communications enormously. We no longer have to rely entirely on an in-building repeater. Many buildings do not have repeater systems and those that do may lose the ability to boost radio signals when damaged during the very incident to which we are responding. Because of the effectiveness and strategic import of this package of communications enhancements, the Department has deployed 75 post radios throughout the City. We now have 13 Battalion car repeaters installed, enough for each Battalion car and Division commander who typically respond to the high-rise environment.

These enhanced features have substantially improved the communications capabilities of the Department along with our efforts to improve interoperability among all FDNY personnel and, with local, state, regional and federal partners.

***Interoperability***

We have enhanced interoperable radio communication between the FDNY and numerous other agencies through the installation of ACU-1000 units in the Department's two Field Communications units and two Mobile Command Vehicles. The ACU-1000 takes disparate radio frequencies in use – either VHF, UHF, 800 MHz or cell phones – and "patches" them together so that personnel on different channels can communicate with one another. This allows FDNY Chiefs using their radios to patch in to

communicate directly with other City personnel, for example OEM and NYPD, and with the FBI and other federal agencies.

The City has developed redundant capacity for this important new piece of equipment, as both OEM and NYPD also have this unit. In addition, all FDNY Special Operations Command (SOC) personnel, Chiefs and SOC Support Ladder Companies have the capability to communicate with the NYPD on a dedicated tactical channel ("TAC U"). This is a police frequency that we have programmed into the handie-talkies of all Chiefs and all FDNY units that have HazMat suit capability. Working with key NYPD staff, we have developed operational protocols to effect this interagency communication.

The FDNY has also issued approximately 200 dedicated interoperability radios to all FDNY officers from the Battalion Chief level and above. These supplemental radios, received through the Department of Information Technology and Telecommunications (DoITT), allow FDNY Chiefs to monitor interoperability channels without having to move off of FDNY firefighting tactical channels.

The Department has made important strides in strengthening EMS communications by adding a second citywide radio channel. This additional EMS channel eliminates the overlapping frequencies between our command and citywide channels, enhances the capability of EMS command at the scene of multiple incidents and allows for better utilization of frequency allocations for EMS Chiefs.

We have also worked with NYPD to increase interoperability between our EMS units and the Police Department. Starting on July 1, 2008, EMS units throughout the City

received access to NYPD radio frequencies so that they can directly request police assistance without relaying the message through a centralized dispatcher.

Finally, the Department has been an active participant with DoITT in its development of new communications and dispatch centers. When completed, we will have a more efficient, integrated dispatch system for Fire response, EMS and NYPD in New York City.

***Fire Department Operations Center***

Another innovative tool for interoperable communications and information management is our Fire Department Operations Center (FDOC) located at FDNY Metrotech headquarters. Built with the most advanced technology available to first responders, the FDOC has greatly enhanced our ability to monitor and manage large-scale or multiple incidents and provides our commanders with the resources necessary to facilitate better situational awareness. Uniformed members working in the new FDOC monitor all emergency responses 24 hours a day, 7 days a week.

The FDOC brings more accurate information to the fireground than ever before, while providing the Department with a remote command post in the event of a major disaster. The FDOC has the technological infrastructure to receive live video feeds not only from NYPD helicopters but also the helicopters from a local television news station. FDNY can also now send and receive video to and from the FDOC and can access live traffic camera feeds from the City's Department of Transportation.

***NYCWiN***

DoITT will discuss more extensively the development of NYCWiN, the City's next-generation public safety wireless network that DoITT is developing, but I want to

highlight the importance of this network to the FDNY. Through NYCWiN, the FDNY will be able to establish reliable, wireless connectivity between the FDOC and our field personnel to transmit on-scene data and full-motion, streaming video, and provide remote access to operating procedures, maps and other geographic information. It will greatly enhance our interagency coordination by linking first responder personnel, on-scene, with incident managers at remote sites through real-time data and video feeds.

***Training and Drills***

Of course, true interoperability requires training, drills and actual experience. These drills and experiences will ensure that new interoperability protocols and procedures are familiar to members and are being followed. Regardless of the size and scope of an exercise, the ability to pass current and critical information between FDNY personnel on the fire ground and other operating agencies is vital for a safe and successful operation.

Over the last two years alone, we have conducted more than ten major drills to test and evaluate our interoperable communications equipment, including the TRP-1000, which allows personnel on any radio frequency to hear and communicate with personnel from multiple agencies (including Federal agencies) on up to ten different frequencies.

These drills include one on Rikers Island with the Department of Corrections, a high-rise exercise at AIG's Manhattan headquarters, and drills with the MTA at the LIRR Jamaica station and with the TBTA at the Queens Midtown Tunnel. Several more are scheduled for the fall of 2008, including one at the PATH station at the World Trade Center site.

*Conclusion*

We believe that the FDNY has made very substantial progress toward enhancing its preparedness since 9/11 and we continue to work vigorously to improve our communication capabilities. Thank you for the opportunity to speak with you today. I would be happy to answer your questions at this time.